Owner's Manual & Safety Instructions

Save This Manual Keep this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance and cleaning procedures. Write the product's serial number in the back of the manual near the assembly diagram (or month and year of purchase if product has no number). Keep this manual and the receipt in a safe and dry place for future reference.

REV 15d

CENTRAL MACHINERY®

16" Variable Speed SCROLL SAW

Note: Blade sold separately.
Visit our website at: http://www.harborfreight.com
Email our technical support at: productsupport@harborfreight.com

ITEM 93012

When unpacking, make sure that the product is intact and undamaged. If any parts are missing or broken, please call 1-888-866-5797 as soon as possible.

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No portion of this manual or any artwork contained herein may be reproduced in any shape or form without the express written consent of Harbor Freight Tools.
Diagrams within this manual may not be drawn proportionally. Due to continuing improvements, actual product may differ slightly from the product described herein. Tools required for assembly and service may not be included.

⚠WARNING

Read this material before using this product. Failure to do so can result in serious injury. SAVE THIS MANUAL.

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WARNING SYMBOLS AND DEFINITIONS	
⚠	This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.
⚠ DANGER	Indicates a hazardous situation which, if not avoided, will result in death or serious injury.
⚠ WARNING	Indicates a hazardous situation which, if not avoided, could result in death or serious injury.
⚠ CAUTION	Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.
NOTICE CAUTION	Addresses practices not related to personal injury.

IMPORTANT SAFETY INFORMATION

General Tool Safety Warnings

⚠ WARNING

Read all safety warnings and instructions.
Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.
Save all warnings and instructions for future reference.

1. KEEP GUARDS IN PLACE and in working order.
2. REMOVE ADJUSTING KEYS AND WRENCHES. Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.
3. KEEP WORK AREA CLEAN. Cluttered areas and benches invite accidents.
4. DON'T USE IN DANGEROUS ENVIRONMENT. Don't use power tools in damp or wet locations, or expose them to rain. Keep work area well lighted.
5. KEEP CHILDREN AWAY. All visitors should be kept safe distance from work area.
6. MAKE WORKSHOP KID PROOF with padlocks, master switches, or by removing starter keys.
7. DON'T FORCE TOOL. It will do the job better and safer at the rate for which it was designed.
8. USE RIGHT TOOL. Don't force tool or attachment to do a job for which it was not designed.

Table A: RECOMMENDED MINIMUM WIRE GAUGE FOR EXTENSION CORDS (120 VOLT)				
NAMEPLATE AMPERES (at full load)	**EXTENSION CORD LENGTH**			
	25′	**50′**	**100′**	**150′**
0 – 6	18	16	16	14
6.1 – 10	18	16	14	12
10.1 – 12	16	16	14	12
12.1 – 16	14	12	**Do not use.**	

9. USE PROPER EXTENSION CORD. Make sure your extension cord is in good condition. When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating. Table A shows the correct size to use depending on cord length and nameplate ampere rating. If in doubt, use the next heavier gauge. The smaller the gauge number, the heavier the cord.
10. WEAR PROPER APPAREL. Do not wear loose clothing, gloves, neckties, rings, bracelets, or other jewelry which may get caught in moving parts. Nonslip footwear is recommended. Wear protective hair covering to contain long hair.
11. ALWAYS USE SAFETY GLASSES. Also use face or dust mask if cutting operation is dusty. Everyday eyeglasses only have impact resistant lenses, they are NOT safety glasses.
12. SECURE WORK. Use clamps or a vise to hold work when practical. It's safer than using your hand and it frees both hands to operate tool.
13. DON'T OVERREACH. Keep proper footing and balance at all times.
14. MAINTAIN TOOLS WITH CARE. Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
15. DISCONNECT TOOLS before servicing; when changing accessories, such as blades, bits, cutters, and the like.
16. REDUCE THE RISK OF UNINTENTIONAL STARTING. Make sure switch is in off position before plugging in.
17. USE RECOMMENDED ACCESSORIES. Consult the owner's manual for recommended accessories. The use of improper accessories may cause risk of injury to persons.
18. NEVER STAND ON TOOL. Serious injury could occur if the tool is tipped or if the cutting tool is unintentionally contacted.
19. CHECK DAMAGED PARTS. Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function – check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.
20. DIRECTION OF FEED. Feed work into a blade or cutter against the direction of rotation of the blade or cutter only.
21. NEVER LEAVE TOOL RUNNING UNATTENDED. TURN POWER OFF. Don't leave tool until it comes to a complete stop.

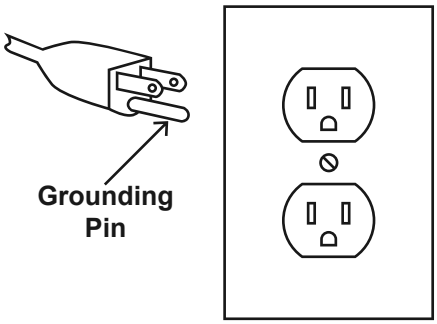
Grounding Instructions

⚠WARNING

TO PREVENT ELECTRIC SHOCK AND DEATH FROM INCORRECT GROUNDING WIRE CONNECTION READ AND FOLLOW THESE INSTRUCTIONS:

110-120 VAC Grounded Tools: Tools with Three Prong Plugs

1. In the event of a malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This tool is equipped with an electric cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into a matching outlet that is properly installed and grounded in accordance with all local codes and ordinances.
2. Do not modify the plug provided – if it will not fit the outlet, have the proper outlet installed by a qualified electrician.
3. Improper connection of the equipment-grounding conductor can result in a risk of electric shock. The conductor with insulation having an outer surface that is green with or without yellow stripes is the equipment-grounding conductor. If repair or replacement of the electric cord or plug is necessary, do not connect the equipment-grounding conductor to a live terminal.
4. Check with a qualified electrician or service personnel if the grounding instructions are not completely understood, or if in doubt as to whether the tool is properly grounded.
5. Use only 3-wire extension cords that have 3-prong grounding plugs and 3-pole receptacles that accept the tool's plug.
6. Repair or replace damaged or worn cord immediately.



125 VAC 3-Prong Plug and Outlet (for up to 125 VAC and up to 15 A)

7. This tool is intended for use on a circuit that has an outlet that looks like the one illustrated above in **125 VAC 3-Prong Plug and Outlet**. The tool has a grounding plug that looks like the plug illustrated above in **125 VAC 3-Prong Plug and Outlet**.
8. The outlet must be properly installed and grounded in accordance with all codes and ordinances.
9. Do not use an adapter to connect this tool to a different outlet.

Scroll Saw Safety Warnings

For Your Own Safety Read Instruction Manual Before Operating Scroll Saw

1. Wear eye protection.
2. **DO NOT OPERATE WITH ANY GUARD DISABLED, DAMAGED, OR REMOVED. Moving guards must move freely and close instantly.**
3. The use of accessories or attachments not recommended by the manufacturer may result in a risk of injury to persons.
4. When servicing use only identical replacement parts.
5. Only use safety equipment that has been approved by an appropriate standards agency. Unapproved safety equipment may not provide adequate protection. Eye protection must be ANSI-approved and breathing protection must be NIOSH-approved for the specific hazards in the work area.
6. Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication. A moment of inattention while operating power tools may result in serious personal injury.
7. Industrial applications must follow OSHA guidelines.
8. Maintain labels and nameplates on the tool. These carry important safety information. If unreadable or missing, contact Harbor Freight Tools for a replacement.
9. Avoid unintentional starting. Prepare to begin work before turning on the tool.

10. People with pacemakers should consult their physician(s) before use. Electromagnetic fields in close proximity to heart pacemaker could cause pacemaker interference or pacemaker failure.

11. WARNING: Some dust created by power sanding, sawing, grinding, drilling, and other construction activities, contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Some examples of these chemicals are:
    - Lead from lead-based paints
    - Crystalline silica from bricks and cement or other masonry products
    - Arsenic and chromium from chemically treated lumber

    Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles. (California Health & Safety Code § 25249.5, *et seq.*)

12. WARNING: The cord of this product contains lead and/or di (2-ethylhexyl) phthalate (DEHP), chemicals known to the State of California to cause cancer, and birth defects or other reproductive harm. Wash hands after handling. (California Health & Safety Code § 25249.5, *et seq.*)

13. The warnings, precautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

Vibration Safety

This tool vibrates during use. Repeated or long-term exposure to vibration may cause temporary or permanent physical injury, particularly to the hands, arms and shoulders. To reduce the risk of vibration-related injury:

1. Anyone using vibrating tools regularly or for an extended period should first be examined by a doctor and then have regular medical check-ups to ensure medical problems are not being caused or worsened from use. Pregnant women or people who have impaired blood circulation to the hand, past hand injuries, nervous system disorders, diabetes, or Raynaud's Disease should not use this tool. If you feel any medical or physical symptoms related to vibration (such as tingling, numbness, and white or blue fingers), seek medical advice as soon as possible.
2. Do not smoke during use. Nicotine reduces the blood supply to the hands and fingers, increasing the risk of vibration-related injury.
3. Use tools with the lowest vibration when there is a choice between different processes.
4. Include vibration-free periods each day of work.
5. Grip workpiece as lightly as possible (while still keeping safe control of it). Let the tool do the work.
6. To reduce vibration, maintain the tool as explained in this manual. If any abnormal vibration occurs, stop use immediately.

SAVE THESE INSTRUCTIONS.

Specifications

Motor	120 VAC, 60 Hz, 1.2 A
Switch	Toggle, On/Off, with removable locking key
Table Tilt	0 to 45 degrees (left)
Cutting Depth	2″ (maximum)
Blade Type	5″ L Pin End blade; Can use plain end blade with provided adapters. 15 TPI blade mounted on machine
Throat Depth	16″
Blade Stroke	13/16″
Cutting Speed	400 (min.) to 1600 Strokes per Minute; Variable
Base Mounting Holes	4 - 5/16″ (dia.) holes
Accessories	2 - Hex Keys (2.5 and 4 mm); 2 - Plain end Blade Adapters; 1 - Spare 18 TPI Saw Blade 1 - Spare 15 TPI Saw Blade
Features	Drop foot adjustment, Integrated bellows air pump, 1-3/8″ OD Vacuum port

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Setup - Before Use:

Read the ENTIRE IMPORTANT SAFETY INFORMATION section at the beginning of this manual including all text under subheadings therein before set up or use of this product.

⚠WARNING

TO PREVENT SERIOUS INJURY FROM ACCIDENTAL OPERATION:
Turn the Power Switch of the tool off and unplug the tool from its electrical outlet before performing any procedure in this section.

Note: For additional information regarding the parts listed in the following pages, refer to the Assembly Diagram near the end of this manual.

Assembly/Mounting

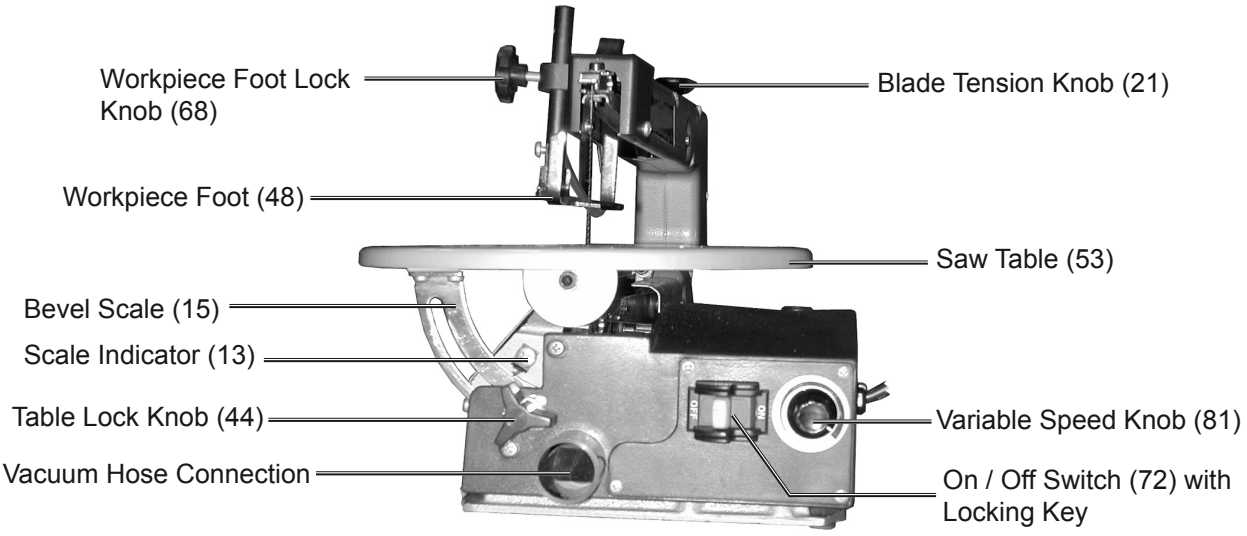
1. Pick a solid, wood workbench to mount the saw. The workbench must be stable, and able to support the weight of the Scroll Saw and the material being cut.
2. Find the four 5/16″ mounting holes in the Base (9) and mark through the holes for drilling with a 3/8″ drill bit. Remove Scroll Saw to drill holes.
3. Replace Scroll Saw over holes and mount with the following hardware (not supplied):
   4 Bolts, 1/4″ x 20 length required;
   4 Flat Washers, 9/32″ I.D.; 4 Lock Washers, 9/32″ I.D.; and 4 Nuts, 1/4 x 20.
4. Check that all Scroll Saw screws and nuts are tight before using the machine.

Check and Align Bevel Indicator

1. Loosen Table Lock Knob (44) and move the table until it is approximately perpendicular (right angle) to the blade. See Functions.
2. Use a small combination square to set the table at 90 degrees to the blade.
3. Tighten the Table Lock Knob (44).
4. Loosen Pan Screw (14) holding the bevel Scale Indicator (13), and adjust Indicator to point to “0” degrees. Retighten Pan Screw.

Note: The bevel Scale Indicator (13) is a guide and should not be relied upon for precision settings. Make practice cuts in scrap wood to determine if the angle settings are correct.

Functions


Workpiece Foot Lock Knob (68)
Blade Tension Knob (21)
Workpiece Foot (48)
Saw Table (53)
Bevel Scale (15)
Scale Indicator (13)
Table Lock Knob (44)
Variable Speed Knob (81)
Vacuum Hose Connection
On / Off Switch (72) with Locking Key
OFF
ON

Read the ENTIRE IMPORTANT SAFETY INFORMATION section at the beginning of this manual including all text under subheadings therein before set up or use of this product.

⚠WARNING

TO PREVENT SERIOUS INJURY FROM ACCIDENTAL OPERATION:
Turn the Power Switch of the tool off and unplug the tool from its electrical outlet before performing any procedure in this section.

TO PREVENT SERIOUS INJURY:
DO NOT OPERATE WITH ANY GUARD DISABLED, DAMAGED, OR REMOVED.
Moving guards must move freely and close instantly.

Table Angle Adjustment

The Saw Table (53) can be adjusted between 0 and 45 degrees as follows:

1. Loosen Table Lock Knob (44) and move the table until the desired angle is reached as indicated on the Bevel Scale (15).
2. Tighten the Table Lock Knob (44).

Workpiece and Work Area Set Up

1. Designate a work area that is clean and well-lit. The work area must not allow access by children or pets to prevent distraction and injury.
2. Route the power cord along a safe route to reach the work area without creating a tripping hazard or exposing the power cord to possible damage. The power cord must reach the work area with enough extra length to allow free movement while working.
3. There must not be objects, such as utility lines, nearby that will present a hazard while working.

Turning On and Adjusting Speed

The On/Off locking Switch (72) needs to have the Switch key inserted before the switch can be used. This feature prevents unauthorized use of the saw.

1. Insert Switch Key into On/Off Switch (72).
2. To turn saw On, place finger on left side of switch and push right.
3. To turn saw Off, place finger on right side of switch and push left.
4. Turn the Variable Speed Knob (81) clockwise to increase the stokes per minute.
5. To lock switch in Off position, pull out the Switch key and store in a safe place.

⚠ WARNING: Keep hands and fingers away from the moving Saw Blade.

6. To prevent accidents, turn off the tool and unplug the tool from its electrical outlet after use. Clean, then store the tool indoors out of children's reach.

Straight, Cross, Bevel Cuts, and Ripping

1. Using a pencil, mark the cut-line on the workpiece.
2. Slide the workpiece underneath the Workpiece Foot (48). If necessary, adjust the Workpiece Foot by loosening the Workpiece Foot Lock Knob (68) and sliding the Workpiece Foot (up or down) until it lightly rests on the workpiece. Tighten the Workpiece Foot Lock Knob (68).
3. Set the On/Off Switch (72) to the On position. The Saw Blade starts moving.
4. Using both hands, carefully guide the workpiece into the blade to cut. Press down on the workpiece and slowly guide it through the Saw Blade (45). Do not force the material through the Blade or the Blade could break.

Inside Cuts

1. Using a pencil, mark the cut-line on the workpiece.
2. Drill a 1/4″ hole in the workpiece.
3. Follow the procedures for removing and installing the Saw Blade (45) as described on page 13.
4. Place the workpiece on the Saw Table (53) so that the hole is centered over the Blade access hole.
5. Insert the Blade through the hole in the workpiece and the Saw Table (53).
6. Reinstall the Blade and properly adjust tension. Refer to page 13. Make sure Blade teeth are facing forward and down.
7. While holding the workpiece with one hand, set the On/Off Switch (72) to the On position.
8. Hold the workpiece with both hands while guiding and pressing down on the workpiece until the cut is complete.
9. Set the On/Off Switch to the Off position.
10. Follow the procedures for removing and installing the Saw Blade (45) as described in Removing and Installing the Blade.
11. With the Blade removed, the workpiece can be removed from the Saw Table.
12. Reinstall the Blade and set the proper tension as described on the next page.

Curved Cuts

1. Mark the entire cutting line with a pencil. If a template is available, use it as a marking guide.
2. Slide the workpiece underneath the Drop Foot (48) without touching the Saw Blade (45).
3. Set the On/Off Switch (72) to the On position.
4. Using both hands, carefully guide the workpiece into the Saw Blade to cut. Press down on the workpiece and slowly guide it through the Blade. Do not force the material through the Blade. When cutting curves, be careful not to twist the Blade out of line.
5. If the curve cut is forced off the cut-line, back the material off the Saw Blade and start a new, straight cut through a scrap section of the material. Begin the curved cut again from an appropriate angle point.
6. Set the On/Off Switch (72) to the Off position when finished cutting.

Jamming of Saw Blade and Workpiece

1. When the Saw Blade (45) jams in the workpiece, immediately press the On/Off Switch (72) to the Off position, and unplug the Line Cord from the electrical outlet.
2. Wait until the Saw Blade has come to a complete stop, then remove the Saw Blade as described in Removing and Installing the Blade. The workpiece will come with it.
3. Place a flat bladed screwdriver in the cut and force it open. Remove the Saw Blade.
4. Reinstall the Saw Blade on the machine as described in Removing and Installing the Blade.

Procedures not specifically explained in this manual must be performed only by a qualified technician.

⚠WARNING

TO PREVENT SERIOUS INJURY FROM ACCIDENTAL OPERATION:
Turn the Power Switch of the tool off and unplug the tool from its electrical outlet before performing any procedure in this section.

TO PREVENT SERIOUS INJURY FROM TOOL FAILURE:
Do not use damaged equipment. If abnormal noise or vibration occurs, have the problem corrected before further use.

Cleaning and Maintenance

1. **BEFORE EACH USE,** inspect the general condition of the tool. Check for:
   - loose hardware,
   - misalignment or binding of moving parts,
   - cracked or broken parts,
   - damaged electrical wiring, and
   - any other condition that may affect its safe operation.
2. **AFTER USE,** wipe external surfaces of the tool with clean cloth.
3. Periodically, wear ANSI-approved safety goggles and NIOSH-approved breathing protection and blow dust out of the motor vents using dry compressed air.

WARNING! Make sure the power On/Off Switch (72) of the Scroll Saw is in its "OFF" position and that the tool is unplugged from its electrical outlet before performing any inspection, maintenance, or cleaning procedures. Note: All repairs should be done by a qualified technician.

4. **Before each use,** inspect the general condition of the Scroll Saw. Check for loose screws, misalignment or binding of moving parts, cracked or broken parts, damaged electrical wiring, and any other condition that may affect its safe operation. If abnormal noise or vibration occurs, have the problem corrected before further use. **Do not use damaged equipment.**
5. Periodically recheck all nuts, bolts, and screws for tightness.
6. Applying a light coat of paste wax on the Saw Table allows the material being cut to glide smoothly across the Saw Table (53) surface. Buff the wax off with a clean cloth after application.
7. If the Power Cord (2) is worn, cut, or damaged in any way, replace it immediately.
8. Clean the Scroll Saw by using compressed air to blow off dirt and dust.
9. Store in a clean and dry location.
10. Over time, if the performance of the Scroll Saw diminishes, or it stops working completely, it may be necessary to replace the Carbon Brushes in the Motor (51) by removing the Carbon Brush Holder (84) and inspecting the Carbon Brushes (83). This procedure should be completed by a qualified technician. If the Carbon Brushes are not worn down, try cleaning the Carbon Brush tips with an ink eraser.

Lubrication

1. Lubricate the Oil Bushings (25) of Lower Rocker Arm (22) and Upper Rocker Arm (29) after the first 10 hours of use. After that, oil them every 50 hours of use, or whenever noise is heard from the Oil Bushings.

Caution: Do not attempt to oil the motor bearings or service the motor internal parts.

2. Carefully place the Scroll Saw on its side as shown in Figure A.

Figure A

3. Squirt a few drops of light oil on the end of the Oil Bushings.
4. Leave the Scroll Saw in this position over night to allow the oil to seep in.
5. The next day, repeat steps 1 to 4 on the other side of the Scroll Saw.
6. Wipe up excess oil with a cloth.

⚠WARNING! If the supply cord of this power tool is damaged, it must be replaced only by a qualified service technician.

Removing and Installing Blades

Note: Blade sold separately.

1. Loosen the Blade Tension Knob (21) by turning counterclockwise about two full turns. Refer to the photo at the bottom of page 9.
2. Push down slightly on the Upper Rocker Arm (29) and remove Saw Blade (45) from Upper Blade Holder (37) by pulling forward. See Figure B.

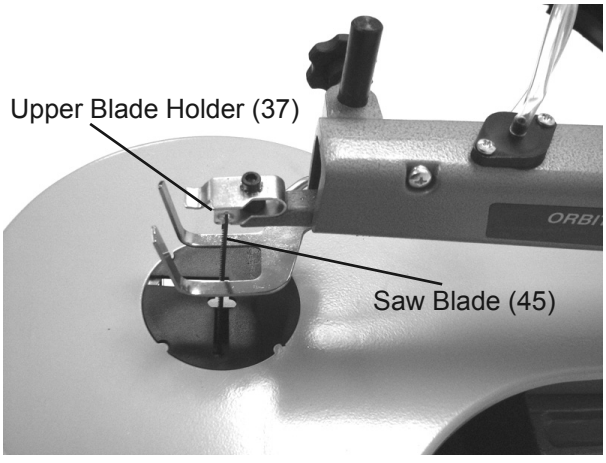


Figure B

3. Remove Blade from Lower Blade Holder (40) and pull up through the access hole.

Note: The Saw Blade must be installed so that its teeth are facing forward (front cutting), or to the side (side cutting), and always pointing down.

4. Attach a new (5″) Saw Blade through access hole and hook pins into Lower Blade Holder (40).
5. Attach upper Saw Blade hook pins into the Upper Blade Holder (37). Make sure the pins of the Blade are in the slots of the Blade Holders.
6. Tighten the Blade Tension Knob (21) by turning clockwise about two full turns.

Note: The Blade is at the proper tension when the slack is just barely removed. Over or under tensioning of the blade causes premature breakage during operation.

The Scroll Saw can use a variety of blade widths and thicknesses, as long as they are 5″ long and have the cross pin for mounting. These are used for cutting various types of materials as listed below:

Teeth / Inch	Width	Thickness	Material Cut
10	0.11″	0.02″	Medium turns on 1/4 to 1-3/4″ wood, soft metals, wallboard, hardboard.
15	0.11″	0.02″	Same as above except for wood. Cuts wood from 1/8 to 1-1/2″ thick.
18	0.095″	0.1″	Extra thin cuts on soft woods and other materials up to 1/4″.

Mounting Plain Ended Blades

Included as an accessory are two Plain End Blade Adapters. When installed, they enable the mounting of plain end saw blades (not included). To install blades of this type:

1. Using a Hex Wrench, loosen both set screws on each of the Plain End Blade Adapters.
2. Slide the gap between the two set screws over each end of the blade.
3. Evenly tighten all set screws. Pull on the Adapters slightly to make sure they are secure.
4. Remove the old blade. Pull the Insert out and rotate it 90° to the position shown at right.
5. Loosen the Blade Tension Knob (21) by turning counterclockwise about two full turns.
6. Place the Blade Adapter's bar under the end of the Lower Blade Holder (40). Make sure that the blade's teeth point the right direction.
7. Push down slightly on the Upper Rocker Arm (29), and place the Blade Adapter's other bar over the end of the Upper Blade Holder (37).
8. Tighten the Blade Tension Knob (21) by turning clockwise about two full turns.

Troubleshooting

Problem	Possible Causes	Likely Solutions
Blades breaking	1. Wrong Blade Tension 2. Over-working blade. 3. Wrong blade application. 4. Blade twisting in wood.	1. Adjust blade tension. 2. Reduce feed cut rate. 3. Use narrow blades for cutting thin wood, wide blades for cutting thicker wood. 4. Avoid side pressure on blade.
Motor does not run.	1. No power at outlet. 2. Defective power cord or plug. 3. Defective motor.	1. Check power source. 2. Repair or replace defective parts. 3. Have motor repaired or replace by a qualified service technician.
Excessive Vibration	1. Improper Base mounting. 2. Unsuitable mounting surface. 3. Loose motor mounting.	1. Make sure mounting hardware is secure. 2. The heavier the work bench, the less vibration will occur. 3. Check motor mounting hardware is secure.
Blade not in line with arm motion	Blade holders not aligned.	Loosen Hex Bolts and re-align Upper and Lower Blade Holders. Tighten Hex Bolts.
Tool will not start.	1. Cord not connected. 2. No power at outlet. 3. Tool's thermal reset breaker tripped (if equipped). 4. Internal damage or wear. (Carbon brushes or switch, for example.)	1. Check that cord is plugged in. 2. Check power at outlet. If outlet is unpowered, turn off tool and check circuit breaker. If breaker is tripped, make sure circuit is right capacity for tool and circuit has no other loads. 3. Turn off tool and allow to cool. Press reset button on tool. 4. Have technician service tool.
Tool operates slowly.	Extension cord too long or wire size too small.	Eliminate use of extension cord. If an extension cord is needed, use one with the proper diameter for its length and load. See **Table A** on page 3.
Performance decreases over time.	1. Accessory dull or damaged. 2. Carbon brushes worn or damaged.	1. Keep cutting accessories sharp. Replace as needed. 2. Have qualified technician replace brushes.
Excessive noise or rattling.	Internal damage or wear. (Carbon brushes or bearings, for example.)	Have technician service tool.
Overheating.	1. Forcing machine to work too fast. 2. Accessory dull or damaged. 3. Blocked motor housing vents. 4. Motor being strained by long or small diameter extension cord.	1. Allow machine to work at its own rate. 2. Keep cutting accessories sharp. Replace as needed. 3. Wear ANSI-approved safety goggles and NIOSH-approved dust mask/respirator while blowing dust out of motor using compressed air. 4. Eliminate use of extension cord. If an extension cord is needed, use one with the proper diameter for its length and load. See **Table A** on page 3.

Follow all safety precautions whenever diagnosing or servicing the tool.
Disconnect power supply before service.

PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS LIST AND ASSEMBLY DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER OR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT, OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS, AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.

Parts List

Part	Description
1	PC Board
2	Power Cord
3	Spring Washer 6
4	Hex Nut M6
5	Cross Recessed Pan Head Screw M5x10
6	Plate Cover
7	Spring Washer 8
8	Bolt M8x25
9	Base
10	Bolt M6x16
11	Arm Housing Set
12	Support Table
13	Scale Indicator
14	Cross Recessed Pan Head Screw M6x12
15	Bevel Scale
16	Spring Washer 5
17	625ZZ Bearing
18	Washer 6
19	Hex Socket Cap Head Screw M6x40
20	Spring
21	Blade Tension Knob
22	Rocker Arm, Lower
23	Spring Washer 4
24	Hex Socket Cap Head Screw M4x10
25	Oil Bushing
26	Cross Recessed Pan Head Screw M5x6
27	Cup Head Square Neck Bolt M6x25
28	Retainer
29	Rocker Arm, Upper
30	Hex Nut M5

Part	Description
31	Hex Socket Cap Head Screw M5x20
32	Spacer
33	Large Washer 6
34	Link
35	4mm Hex Key
36	Strain Relief
37	Upper Blade Holder
38	Hex Socket Cap Head Screw M5x25
39	Washer 4
40	Lower Blade Holder
41	Pan Head Tapping Screw ST4.2x10
42	Hex Socket Cap Head Screw M4x16
43	Throat Plate
44	Table Lock Knob
45	15 TPI Saw Blade (sold separately)
46	Cross Recessed Pan Head Screw M4x16
47	Cross Recessed Pan Head Screw M4x10
48	Workpiece Foot
49	Cross Recessed Pan Head Screw M5x25
50	Switch Plate
51	Motor
52	Eccentric
53	Saw Table
54	Hex Socket Cap Head Screw M6x35
55	Tubing
56	Adjustment Level

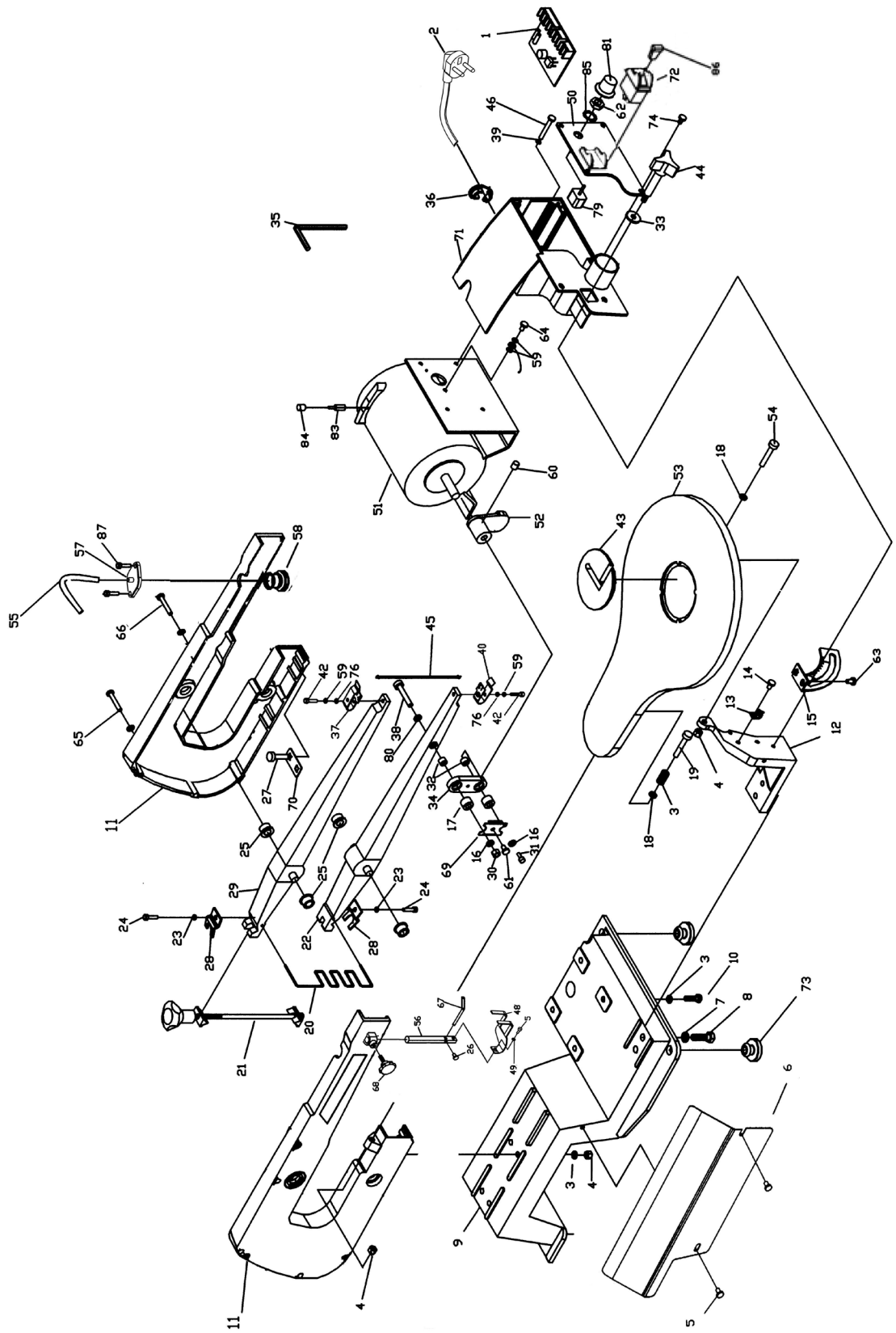
Part	Description
57	Bellows Lock
58	Bellows
59	Tooth Washer 4
60	Hex Socket Set Screw M8x8
61	Pan Head Tapping Screw ST4.2x8
62	Hex Nut M10
63	Cross Recessed Pan Head Screw M5x8
64	Cross Recessed Pan Head Screw M4x6
65	Cross Recessed Pan Head Screw M5x35
66	Cross Recessed Pan Head Screw M5x30
67	Saw Dust Blower
68	Workpiece Foot Lock Knob
69	Bearing Retainer
70	Bolt Retainer
71	Switch Box
72	On/Off Switch
73	Rubber Foot
74	Pan Head Tapping Screw ST4.2x13
75	Plate Cover
76	Spacer
79	Potentiometer
80	Washer 5
81	Variable Speed Knob
82	Cross Recessed Pan Head Screw M5x10
83	Carbon Brush
84	Carbon Brush Cover
85	Lock Washer 10
86	Switch key

Record Product's Serial Number Here:_____

Note: If product has no serial number, record month and year of purchase instead.

Note: Some parts are listed and shown for illustration purposes only, and are not available individually as replacement parts.

Assembly Diagram



Limited 90 Day Warranty

Harbor Freight Tools Co. makes every effort to assure that its products meet high quality and durability standards, and warrants to the original purchaser that this product is free from defects in materials and workmanship for the period of 90 days from the date of purchase. This warranty does not apply to damage due directly or indirectly, to misuse, abuse, negligence or accidents, repairs or alterations outside our facilities, criminal activity, improper installation, normal wear and tear, or to lack of maintenance. We shall in no event be liable for death, injuries to persons or property, or for incidental, contingent, special or consequential damages arising from the use of our product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation of exclusion may not apply to you. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS.

To take advantage of this warranty, the product or part must be returned to us with transportation charges prepaid. Proof of purchase date and an explanation of the complaint must accompany the merchandise. If our inspection verifies the defect, we will either repair or replace the product at our election or we may elect to refund the purchase price if we cannot readily and quickly provide you with a replacement. We will return repaired products at our expense, but if we determine there is no defect, or that the defect resulted from causes not within the scope of our warranty, then you must bear the cost of returning the product.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

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